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SUMMARY

A review of the District's telephone equipment and usage cost indicates that the District has developed a complex telecommunications network that requires close administrative management and technical coordination. While this study focuses on the Centrex system and the economies which can be realized in its fine-tuning, the broad scope of the network, from radio channels to private telephone equipment, to the telephone information system, suggests many opportunities for the more cost-effective integration of all aspects by an experienced communications specialist. Certainly, the telephone company charges totaling \$456,000 a year indicate somewhat the extensive investment of RTD resources, especially when further considering additional equipment, salary cost and facilities relating to telecommunications.

In addition to the recommendations establishing a communications specialist position, a number of technical areas are identified for the initial attention of this specialist. Also, improvements are recommended in administrative procedures such as the assignment of departmental review and monitoring responsibilities, and the establishment of a telephone use policy and telephone equipment policy.

INTRODUCTION

Telephone communication in the RTD is provided through several telephone systems, extensive equipment and facility investments and varying capabilities of service. The focus of this study is the Centrex system which provides inter-departmental service as well as service to the public telephone system. However, Centrex is only a part of the RTD system and cost. The following is a brief breakdown of the components.

Centrex - Short for "central exchange" this system is leased from Pacific Telephone Company which maintains the equipment on their premises. Because the operations of this system are computerized, a number of immediate responsive features are offered without the need for operator intervention, such as the call-forward feature, immediate outside line connections, transfer feature and three-party conference call feature. (See Appendix A, Glossary.)

The computerization also permits monitoring and restricting telephone usage such as itemized billing for each main line, area code dialing restrictions, nine-level restrictions and interior restrictions.

This system thus offers convenience with such cost reduction features as reducing the need for operators, for lighted-button telephones, for intercom and reducing time in placing calls. The RTD currently has 598 main line and 730 stations or locations with telephones. Monthly charges for this system have been running about \$24,000 a month and are recorded in the General Services Account. (See Table I)

Table I
Average Monthly Telephone Charges

Centrex	\$24,000
Telephone Information Center	7,000
ATSS	400
Local private lines	1,620
Inter-Exchange private lines	1,800
Coin telephones	280
Local public lines	1,170
Other	1,960
Total	<u>\$38,230</u>

Telephone Information Center - The public information service provided by the District is served primarily by a Pacific Telephone Company system called Automatic Call Distribution System. This complex system

utilizes some of the most sophisticated equipment for call monitoring and response that is available from the telephone company. The telephone information center also includes reverse foreign exchange lines which permit the public to call into the center from anywhere in the District without charge to the public. Monthly equipment and usage charges for this system average about \$7,000 and are recorded on the Customer Information account.

ATSS - The Automatic Telecommunications Switching System is a State-leased line system which the District can use for calls to public agencies and to public-line prefixes in most major metropolitan areas of the State. There are no lease charges for the use of this system; the District pays only for the cost of each call made on the system. The charges for calls made on ATSS generally run between 30% to 80% less than charges for the same calls made on public lines, depending upon the number called, length of the call and time of day. Most RTD Centrex phones have access to this system. Extensive instructions on the use of this system are provided in the State of California Telephone Directory. The current monthly bill for calls made on this system has averaged \$400 and is recorded on the General Services account.

Local Private Lines and Inter-Exchange Private Lines - These lines provide circuits for the District's private telephone and radio communications systems. These lines are used for communications between mobile units (buses and automobiles) and the Dispatch Center, between the Dispatch Center and the California Highway Patrol, Fire Department, Los Angeles Police Department and the divisions and between the Telephone Information Center and remote ticket offices and divisions. Local private lines serve the Los Angeles extended area and inter-exchange private lines serve outside this area. The distinction between the two lines is for tariff reasons. The District has 47 local lines at a cost of \$1,620 per month and 25 inter-exchange lines at a cost of \$1,800 per month. The cost of these lines is shared by Transportation, Maintenance and Customer Information accounts.

Coin Telephones - Coin telephones are provided in each division, at Busway stations, Park and Ride lots and in the 425 S. Main building by either the RTD or the telephone company. The RTD pays for 21 coin telephones called "semi-public" in 11 locations. These telephones cost the District monthly between \$7.50, the base rate, and \$15.25 per phone, with the added equipment charges for touchtone, booths and panel (recessed into the wall) phones. All revenues from use are retained by the phone company. These costs total about \$280 per month and are

billed to General Services, Transportation and Maintenance Departments. Thirty-five additional telephones such as those in the El Monte station, are "public," maintained by the telephone company and provide the RTD with a 15% commission of revenue from these telephones. Revenue from "public" coin telephones averages \$550 a month.

Local Public Lines - In addition to the Centrex system which provides service to public telephone lines, each division has one or two local lines. These lines provide the advantage of calling in the vicinity of the division as a local call. If the Centrex line were used, for example, by Division 12 to call an operator who lived in the Long Beach area, the call would be charged as a multi-message unit call (25¢ for three minutes). But by using their local line, the call to the operator is a local call (5¢). Similarly, operators can call into the division on the local line with a local call charge. The cost of these phones averages \$1,170 per month, and is recorded in Transportation and Maintenance Department accounts.

Other - Other telephone service the District utilizes includes advertising in many directories in the District, local public lines to Cash Counting, RTD field offices, RTD ticket offices and the Dispatch Center and other features such as alarm system services, computer equipment connections for terminals and closed circuit television lines. The costs of these services averages \$1,960 monthly and are recorded in Customer Information, Transportation, Planning, Bus Facilities, Special Agents and Data Processing Department accounts.

DISCUSSION

General Cost Factors

The costs of telephone service basically fall into equipment and use charges. Equipment charges are not fixed in respect to the number of telephones the District requires: they are increased by the addition of features such as the touchtone dialing system and decreased by use of interior restrictions.

Equipment also has an impact on telephone use charges. While usage costs directly relate to telephone use, the easy availability of unrestricted outside lines also affects usage costs by allowing increased use.

Equipment charges are incurred for all features or aspects of the system which the District is purchasing. Examples of most common monthly equipment charges are:

telephone with outside line	\$7.48
extension	3.25
six-button feature	2.20
illuminated button feature	3.00
touchtone dial	1.00
transfer and hold feature	.35

It can readily be seen that the addition of features can more than double the cost of equipment charges: the cost of the six-button feature, the illuminated button, the touch-tone dial, and the transfer and hold button cost \$7.55 more than the \$7.48 cost of the basic telephone with an outside line.

These charges, which relate to the equipment features of a particular instrument, are applied to the itemized monthly billing of the appropriate telephone.

Other equipment charges which are utilized by multiple telephones are billed as "common" equipment. Examples of this would be the cost of an intercom, which costs \$7.25 monthly regardless of the number of telephones which are connected.

Use charges are divided into three categories: local, message unit, and long distance. All outside calls made from District telephones result in a use charge which is assigned to the appropriate telephone.

Local calls currently cost 5¢ for one message unit each, but Pacific Telephone indicates that this charge will be raised this year to reflect the length of these calls. "Message unit" calls are those made to non-local areas of Los Angeles County, except Canoga Park, Covina, Malibu, San Fernando and San Pedro which are billed as long distance calls. (See Table II.)

"Message unit" calls are billed in \$.05 units and the number of message units reflects the time length and distance of the call. Long distance calls are billed at various rates per each minute the call lasts.

Table II shows typical costs of some local, long distance and message units calls in the Los Angeles County area. The long distance rates shown are those which apply during weekday business hours.

Table II
Cost of Calls
To Selected Los Angeles County Destinations

<u>Call Type</u>	<u>Destination</u>	<u>Time Allowed</u>	<u>Cost</u>
local	Greater central Los Angeles Alhambra, Glendale, Montebello		\$.05
213 long distance	Canoga Park, Covina, San Fernando, San Pedro	one minute	.19
Message unit	Long Beach, Reseda, etc.	three minutes	.25
	Santa Monica, Van Nuys, Whittier, etc.	three minutes	.20
	Downey, Inglewood, Pasadena, etc.	three minutes	.15

While District employees call a wide variety of destinations outside of the 213 area, the rate applying to these out-of-county and out-of-state rates are too varied for inclusion here.

These equipment and use charges are somewhat deceptive in that they appear small. However, it should be remembered that, taken together, these and other small expenses combine to total nearly \$24,000 monthly or about \$300,000 for FY 1976-77.

The total cost of the District's telephone charges are illustrated in Table III. As indicated, the District has experienced a 130% increase in telephone costs in the past 18 months. Further, since January 1976, telephone use charges have gone up by 46%.

Table III also shows the growth of Centrex charges in the past year. As Centrex has been installed, its use and proportion of the total District phone bill has increased. Centrex use and Centrex equipment charges are illustrated in Tables IV and V.

Two important points must be made with respect to this relationship between the Centrex and total charges. First, as the Centrex system has come into use, total system costs have increased. In addition, even as temporary expenses such as Centrex installation charges have stopped, total system charges have not decreased equally but have instead leveled off or increased.

These increased use charges were reviewed in data from January to June, 1976, from the itemized billings of 54 telephones spread throughout the various departments. The data indicates that the increase in telephone cost is the result of increased use by a constant number of employees, not by an increase in the number of employees.

The primary conclusions which can be drawn from this information is that the telephone use-patterns of District employees have and are changing. This change has been towards greatly increased telephone use and has resulted in the accordingly higher costs.

There are many reasons why telephone use and costs have increased:

- 1) the installation of the Centrex system which requires more main lines and accordingly higher service charges;
- 2) increased use associated with the easier access to outside lines;
- 3) inability to monitor and control non-District related long-distance, message unit, and local calls;
- 4) failure to fully utilize the capabilities of the Centrex system;

- 5) the increasing installation of expensive equipment which duplicates Centrex;
- 6) a Pacific Telephone 5.1% rate increase effective January, 1976;
- 7) the increased cost associated with the "touch tone" dialing feature: one dollar a month for each instrument for a total monthly charge of about \$650.

These increased costs are partially balanced by a decrease of one Telephone Information Operator assigned to switchboard activities.

In addition to this, the District's new Centrex telephone system provides levels of service and capabilities which are far superior to the earlier system and which have probably improved the efficiency of the District's office operations.

The next section deals with means of achieving a full utilization of Centrex, maintaining equipment features necessary for a high quality telephone system and of identifying cost areas where savings and efficiency can be improved.

Table III
Total Telephone Costs
January 1975 to June 1976

	<u>749-6977</u>	<u>Centrex</u>	<u>Centrex Installation*</u>	<u>Total</u>
January, 1975	\$10,760	-	-	\$10,760
February	11,725	-	-	11,725
March	11,367	-	-	11,367
April	11,849	-	-	11,849
May	12,541	-	-	12,541
June	9,000	19,367	(\$11,356)	28,367
July	8,444	7,973	(165)	16,418
August	8,006	8,497	(26)	16,502
September	8,888	8,069	(78)	16,957
October	8,262	12,990	(2,562)	21,250
November	8,087	10,337	(248)	18,424
December	7,833	16,958	(3,897)	24,792
January, 1976	5,084	23,001	(5,503)	28,085
February	1,754	22,253	(2,430)	24,007
March	930	23,864	(2,868)	24,794
April	-	26,886	(3,490)	26,886
May	-	22,875	(253)	22,875
June	-	23,849	(865)	23,849

* Centrex installation costs are included in total Centrex costs.

Table IV
 Aggregate Centrex Use Charges
 January - June 1976

	Message Units	Long Distance	Total
January	\$3,131	\$3,685	\$6,816
February	3,351	4,752	8,103
March	3,659	4,853	8,501
April	4,395	5,957	10,316
May	4,103	5,614	9,717
June	4,036 (+28%)	5,923 (+60%)	9,958 (+46%)

Table V
 Centrex Equipment Charges

January	\$ 11,422
February	11,695
March	12,435
April	12,984
May	12,845
June	12,964

RECOMMENDATIONS: DISCUSSION

1. Communications Specialist

The District requires a very complex, geographically dispersed and expensive communications network, combining over 700 Centrex system telephones, a 43-station telephone information center, 47 local private lines and 25 inter-exchange private lines used for the RTD private telephone and radio communications system, 23 local public lines in divisions, and other telephone equipment such as for computer connections, closed circuit television lines and alarm system lines. This complex and varied system allows a set of options in terms of alternative technologies, and requires a great deal of administrative detail and follow through.

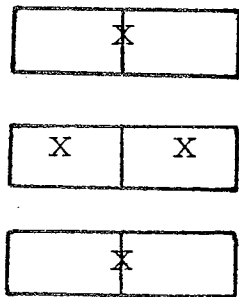
With respect to telephone equipment, "extra" equipment features and equipment configurations, complex calculations are necessary to determine the least expensive means of meeting the District's needs.

An example of this type of calculation is the decision on installing six-button telephones. The six-button features allows a single telephone to have access to multiple lines. As several six-button telephones usually have access to the same lines, this allows professional employees to answer one another's lines and to have conference calls. This is called a key system.

Taking a very simple four-instrument key system with four main lines as a model, the cost of equipment implementation decisions can be illustrated. This key system serves six employees.

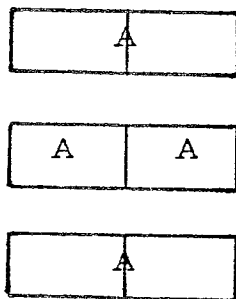
By diagramming these four telephones as they are physically situated, the equipment configuration can be compared with alternative configurations.

DIAGRAM OF EXISTING AND ALTERNATIVE EQUIPMENT CONFIGURATION
(View of Desks From Above)



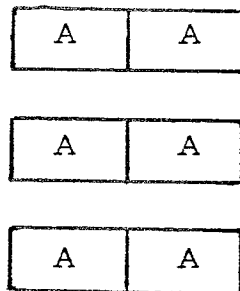
X = six-button telephone;
all four telephones are
served by the same four
lines

Configuration I: Diagram of an Existing Key System



A = regular main-line
telephone served by one
line

Configuration II: Diagram of Four Separate Main-Line Telephones



A = regular main-line
telephone served by one
line.

Configuration III: Diagram of Six Main-Line Telephones

In order to compare the costs of these alternative equipment configurations the following table identifying the major cost variables has been compiled.

<u>Configuration</u>	<u>Number of Instruments</u>	<u>Main Line Costs</u>			<u>Cost of Six-Button Features</u>			<u>Monthly Total</u>
I	4	\$7.48	X	4	\$5.55	X	4	\$52.12
II	4	\$7.48	X	4	\$	0		\$29.92
III	6	\$7.48	X	6	\$	0		\$44.88

Configuration I, the most expensive alternative assessed, is currently being used. While this configuration does provide some capability not immediately evident in the other arrangements, Pacific Telephone indicates that this capability is a duplication of the Centrex system.

Configuration II costs 57% and Configuration III, 86% of the present system. This is important as Configuration II has the same number of main lines while Configuration III actually represents a 50% increase in main lines at a lower cost.

Two things must be emphasized. First, this is a very simple key system of only four telephones. The District has a total of 67 key systems, some of which have up to 20 telephones.

Also, the three configurations listed here do not exhaust the possibilities. The use of extensions, interior and nine-level restrictions, and the maintenance of necessary (those not redundant to Centrex) six-button telephones make the calculation potentially very lengthy, complex and profitable.

In respect to the District's Centrex system, there seems to have been an absence of expert and consistent in-house guidance involved in the many department-level decisions on acquiring expensive telephone equipment or in maximizing the system's utility or in minimizing costs.

Pacific Telephone indicates that, given the size and scope of the RTD system, their dealings with the RTD have been difficult because of the lack of a technically qualified expert guiding the RTD in its day-to-day decisions on the telephone system.

It is recommended that complete responsibility for the District's telephone and communications systems be assigned to a new, professional position. The individual assigned to this position should have professional experience and expertise in telephone and radio communications.

The responsibilities assigned to this position should include administration and decision-making on equipment and use policies of the Centrex system, the telephone information center, and all other telephone, radio, and electronic communications systems.

The following list is an outline of the areas of responsibility that should be assigned to the specialist:

1. Monitoring and controlling:

- Foreign Trunk Lines
- WATS line
- Equipment Reduction and Installation
- ATSS
- Centrex
- Radio Equipment and Stations
- Telephone Information Center Equipment
- P Phones
- Coin Telephones
- Monthly Bills and System Description

2. Informing departments on how to use system properly, and on changes in policy and system, and
3. Maintaining telephone company contact and negotiating with telephone company for service.

2. Executive Staff / Department Head Responsibility

During the course of this study, it was learned that the telephone company can provide a departmental compilation of telephone bills. A numerical separation has since been compiled and Executive Staff and department heads should begin to receive a bill, sectionalized on the basis of departmental accounting codes, in September, 1976. With the implementation of departmental billing, it will then become the responsibility of Executive Staff members/department heads to monitor and control usage.

It is recommended that Executive Staff members/department heads be responsible for:

- 1) reviewing monthly department bills to determine whether the calls were made for business purposes, were necessary and were made in the most economical way;
- 2) communicating to employees the District's policy on telephone usage;
- 3) keeping employees informed of changes in the telephone system that may affect employees' usage, such as changes in restrictions on ATSS; and
- 4) evaluating their department needs for telephone service and seeking means of reducing cost.

3. Six-Button Telephones

While the District is paying the cost of a sophisticated and computerized Centrex system, it has also installed and is paying for additional equipment which duplicates in some sense Centrex capabilities.

An example of this is the great number of six-button telephones the District has. District employees currently make use of 352 six-button telephones.

This type of telephone permits one professional employee to answer another's telephone, and may be of benefit to some departments such as the Special Agents. However, this feature is usually a duplication of the advantages of Centrex at an increased cost of \$5.55 per month per instrument for a total cost increase of \$1,787 monthly.

According to representatives of Pacific Telephone, the District has an excessive number of these six-button sets, and they are essentially redundant to Centrex features. Pacific Telephone has indicated a willingness to evaluate with each department head each six-button telephone to identify those which can be removed.

The use of this feature could be limited to those who, because of their administrative or supervisory duties, can obtain benefits from a six-button telephone which cannot be efficiently or economically obtained from the normal Centrex system services.

Allowing that Executive Staff members, Department Heads, Special Agents, and the operating divisions need this feature, it can be estimated that the number of six-button telephones could be reduced from 352 by 196 to 156, for a savings of \$1,078 a month.

It is recommended that a freeze be established on installing additional six-button telephones.

It is further recommended that this equipment reduction be a priority area of action and attention by the communications specialist position, when it is filled.

It is further recommended that a policy be established that only operating divisions, department head positions and above be allowed a six-button telephone, unless some overriding need is established such as the emergency responsibilities of the Special Agents.

4. Increased ATSS Use

A review of the Automatic Telecommunications Switching System (ATSS) "State Line" itemized monthly billing indicates that the District is not making maximum use of this opportunity for reducing costs on in-state long distance calls.

Table VI compares ATSS costs for the period from March to May, 1976, with the public line cost for making the same calls.

Table VI

Comparison: ATSS ("State Line") Long-Distance Costs and
Public Line Long-Distance Costs

	Public Lines	ATSS	Savings	% Savings
March	\$ 719	\$ 343	\$ 376	52%
April	811	399	412	51%
May	902	411	491	54%
Total	\$2,432	\$1,153	\$1,279	53%

It can be seen that, on the average, the District has saved about 53% on calls made on the State ATSS lines. It is possible that even higher percentage savings would be made possible by distributing available information on proper ATSS use.

The "State Line" system is available for use by the District to both in-system (other ATSS numbers) and out-of-system (non-ATSS numbers) to most urban areas in California. However, not all in-state long distance calls can be made on ATSS lines, as not all areas are served by ATSS and other areas, such as Orange County, are called more inexpensively on a regular public line.

It is recommended that more use be made of the ATSS "State Line".

It is recommended further that State Telephone Directories and other necessary information be distributed to Executive Staff members and department heads.

It is also recommended that department heads, in their review of the monthly Centrex billing, identify calls which would more economically be made on ATSS.

Training tools are available from Pacific Telephone Company, providing instruction on how to use the ATSS system. Departments with frequent long-distance calling may find these useful for employees and could be presented in staff meetings. The General Services Manager will be able to provide additional information on these materials.

5. Telephone Use Policy

During the course of this study, it was found that employees have varying degrees of understanding about what calling in the office is acceptable.

It is recommended that a permanent telephone usage policy be adopted that outlines the responsibility of employees in using telephones and the responsibilities of Executive Staff / department heads in monitoring departmental telephone usage. A recommended policy is included as Appendix B. The accepted policy should be included in the Executive Policy and Procedure Manual.

It is further recommended that a policy brief be developed and issued to all employees that outlines the cost of telephone service, the policy on telephone usage and points to remember in making calls. A proposed policy brief is included as Appendix C.

6. Additional Coin Telephones

It is District policy that employees make personal calls from coin telephones. This is a simple method of reducing non-District related use of RTD telephones, reducing possible disruption from personal conversation in the office, and offers more privacy to the user. Currently, coin telephones in the Headquarters building are located on the 2nd floor and in the cafeteria on the 3rd floor, making it inconvenient for some employees to use these telephones.

It is recommended that coin telephones be installed on on the 5th and the 6th floors in the vicinity of the lobby areas to maximize easy access and privacy. These telephones should be classified as "public" telephones as described in the next recommendation.

7. Coin Telephones

As mentioned in the introduction, there are two classifications of coin telephone. Telephone company criteria distinguishing "public" from "semi-public" is vague, varies from clerk to clerk and is applied inconsistently. Generally, if a telephone receives over \$1.50 revenue per day and is for the convenience of the general public, it is classified as "public" and maintained by the telephone company with a 15% commission of all revenues to the RTD. Telephones located in areas for use of

business customers or employees are sometimes classified as "semi-public" and costs the RTD between \$7.50 and \$15.25 depending upon the added features. All revenue from these phones is retained by the telephone company.

An analysis of the "semi-public" phones might reveal economies in consolidation of under-utilized coin phones and result in a change in classification. An example of telephones classified as "semi-public" are four phones at the Hospital Busway Station and University Busway Station. These phones cost the RTD \$58.70 a month at each location. However, seven telephones at El Monte Station are "public". With a review of revenue figures kept by the telephone company, it may be possible to reduce the four telephones at each station to one or two and make a case, then, with the telephone company for re-classifying these telephones as "public". If these phones were reduced to two in both stations and classified as "public", the RTD would save \$1,408.80 a year and they would generate at a minimum, \$324 a year in commission.

It is recommended that this type of analysis be a priority area of action by the communications specialist. The total cost of coin telephones to the RTD could be reduced by \$4,000 a year, if the RTD entered into aggressive negotiations on this matter with the telephone company.

8. Department Head Seminars

With the implementation of the departmental distribution of the monthly itemized billing and the assignment of review and control responsibilities to department heads, a successful cost reduction program is largely dependent upon the support and awareness of department heads of the nature and impact of this problem. Further, it is department heads who have been making decisions and recommendations on equipment requirements.

It is recommended that the communications specialist or the Management Services Section, if the communications specialist is not hired in the near future, conduct meetings for department heads to cover the following items: the increasing cost of telephone equipment and use, the nature of the departmental itemized monthly billing, the department head's responsibilities, and the District's policy on telephone equipment and use.

9. Telephone Equipment Policy

The RTD Centrex system is continually in a state of change with frequent requests to the General Services Manager for alterations and additions to departments' telephone configurations. No centralized policy exists on what guidelines departments or General Services Manager should use in determining if equipment changes are appropriate.

It is recommended that a telephone equipment policy be adopted of general guidelines on telephone equipment installation, identifying the responsibilities and authority of the General Services Manager and describing the procedure for requesting telephone equipment changes. A suggested policy is provided in Appendix D. While it is recognized that the communications specialist may recommend modification to this policy, this policy should be considered permanent. The accepted policy should be kept by the General Services Manager and provided to department heads when telephone system changes are contemplated.

10. Departmental Budget

Centrex telephone equipment and use charges are paid by and budgeted to the General Services Department. With the implementation of the department distribution of the monthly itemized billing, the capacity will exist for improving management procedures and control by budgeting these expenses to the departments which incur them.

It is recommended that Centrex telephone costs be budgeted to departments in accordance with the departmental breakdown of the monthly itemized billing.

11. Directory

In order to achieve optimal utilization of the District's Centrex system and the ATSS and to maximize distribution of information on use and policy, it is necessary to expand general information available for employees.

It is recommended that the telephone directory be expanded to include the following:

1. a department and section listing;
2. emergency and information numbers;
3. a summary of telephone use policy;
4. information on long distance, message units and ATSS calls (see Appendix C and E);
5. an explanation of Centrex use and capabilities; and
6. a suggested format for a Long Distance Call Log (see attachment to Appendix B).

12. Telephone Company Usage and Analysis

Pacific Telephone Company is currently performing an analysis of RTD usage, evaluating the number and length of calls and locations called. From this analysis, the telephone company will make recommendations to the RTD on the acquisition of foreign exchange lines and WATS lines. The decision to utilize these lines is complex, involving the following considerations:

- expensive installation and lease charges;
- the number of lines needed;
- identification of optimal area destination;
- the impact of usage;
- the cost of additional necessary routing equipment; and
- the loss of itemized billing.

It is recommended that no action be taken on foreign exchange lines until six months after the implementation of the departmental billing. After that period a more accurate profile of RTD usage and need may be reflected.

It is also recommended that no action be taken on the implementation of WATS lines until a communication specialist is hired and becomes knowledgeable of the RTD usage.

RECOMMENDATIONS: SUMMARY

The following list summarizes the recommendations made in the previous section.

It is recommended that:

- 1) complete responsibility for all telephone, radio and other electronic communications systems be assigned to a new communications specialist position (see page 11);
- 2) Executive Staff members and department heads be responsible for reviewing the monthly departmentalized billing, keeping employees up to date on policy and other factors which influence use and cost, and seeking means of reducing cost (see page 15);
- 3) a freeze be established on installing additional six-button telephones and that this be a priority action area for the communications specialist, and only department heads and above have six-button telephones, excepting those with an overriding need for this equipment (see page 15);
- 4) more effective use of ATSS "State Lines" be made and that information on "State Line" use be distributed to the Executive Staff and department heads (see page 16);
- 5) a permanent telephone use policy be established outlining areas of responsibility and appropriate employee use of District telephones (see page 18);
- 6) additional coin telephones be installed on the 5th and 6th floors (see page 18);
- 7) the District seek to consolidate necessary "semi-public" coin telephones with less than \$1.50 daily (see page 18);
- 8) the Management Services Section conduct meetings with department heads to discuss the implementation of the sectionalized monthly billing, cost aspects of telephone equipment and use and the District's new policy (see page 19);

- 9) a telephone equipment policy be established outlining areas of responsibility and equipment installation and request procedures (see page 20);
- 10) Centrex telephone charges be budgeted on a departmental basis (see page 20);
- 11) the District telephone directory be expanded to include a department listing, emergency and information numbers, policy summary, long distance information, and information on Centrex usage (see page 21); and
- 12) no action be taken on the implementation of foreign exchange lines for six months and no action be taken on the implementation of WATS lines until the communications specialist is hired (see page 21).

CONCLUSION

The research and recommendations in this report can have a significant impact on RTD telephone use and cost. The recommendations are intended to provide direction into areas where immediate improvement and results can be achieved. However, other complex and long-term efforts at identifying additional areas should also prove cost-effective.

Although the level of telephone cost to the RTD relative to the budget is not substantial, it is clear that because of the minute detail of telephone company rate structure, a number of small "extra" monthly charges could quickly price the RTD system out of the range of cost effectiveness. Thus, it is imperative that the efforts be directed at a continuous review of all aspects of the system.

At little, if any, loss of convenience and with technical expertise focused on this area, the RTD can attain the maximum effectiveness of its high-quality telephone system.

APPENDICES

Appendix A

Glossary of Selected Terms

1. Call director - a telephone with a dial and 12 or more lighted buttons capable of tying into up to twelve lines.
2. Call-forward feature - a capability of Centrex that permits calls to be forwarded to another line after a specified number of rings.
3. Extension - a telephone which shares a line with another telephone: essentially this allows two telephones to use one outside line.
4. Extra line - a second line assigned to a telephone with no other telephones having access to that line.
5. Instrument - telephone, with or without lighted buttons.
6. Interior restriction - a line which can be used for Centrex internal calls only, not permitting either incoming or outgoing calls.
7. Inter-com - an internal means of communicating within a department; a "com line."
8. Key system - a group of telephone lines that can be tied in to a number of telephones through the use of the six-button telephone.
9. Nine-level restriction - a main, outside line that is restricted by requiring outside calls to be placed through the operator.
10. Six-button telephone - a telephone with a dial and six lighted buttons at the base of the telephone, which is capable of tying into six lines.

- 11. Stations - locations with telephones
- 12. Unrestricted line - a main, outside line with no restrictions on use.

Appendix B

Proposed Telephone Use Policy

Purpose

This policy outlines the proper uses of District telephones and identifies responsibility for monitoring and controlling telephone use. It provides a policy and framework against which department heads and Executive Staff may review the monthly itemized billings.

General Policy

1. District telephones are for the conduct of District business and not for the personal convenience of employees. Because of the expense, employees are required to exercise professional restraint and responsibility in the use of RTD telephones.
2. It is the responsibility of Executive Staff/department heads to monitor and control telephone usage in accordance with this policy.

Executive Staff / Department Head Responsibility

1. It is the responsibility of the Executive Staff member / department head to control telephone costs by seeking to eliminate unnecessary message unit and long distance business calls and by minimizing the frequency of necessary business calls, consistent with cost effective management.
2. The monthly itemized telephone billings will be distributed to the appropriate Executive Staff / department head.
3. It is the responsibility of the Executive Staff member / department head to review the monthly itemized billings to insure that all charges which are incurred are directly related to District business.

Employee Responsibility

1. Employees must exercise restraint and responsibility in using the telephones for personal matters. RTD telephones are for District business use.
2. Because of the cost and possible unnecessary distraction to other employees, personal calls made from office telephones must be strictly held to a minimum. Pay telephones are available in the cafeteria and on the second floor for personal calls.
3. Excepting personal calls necessitated by work requirements, for example, if an employee must stay late, all message unit calls must be charged to the employee's home number or the charges reversed.

4. Long distance personal calls should not be made on office phones; coin telephones should be used for this purpose. However, when circumstances require, such long distance calls from office telephones shall be charged to the employee's home telephone number or the charges for these calls reversed.

Long Distance Calls

1. All long distance calls should be made with discretion and with the prior approval of the department head.
2. Employees should take care to use the least expensive mode of communication available, consistent with District interest and efficient operations.
3. Long distance calls should be kept to an efficient minimum by avoiding, when possible, very frequent calls to the same destination.
4. It is recommended that employees maintain a log of their long distance and message unit telephone calls in order to insure an accurate billing from the telephone company and to provide an easy verification of business calls (for proposed log, see attachment).

ATSS Lines

1. It is illegal to use ATSS lines for personal use. (State Administrative Manual, Section 4533)
2. ATSS lines shall not be used in calling Los Angeles County destinations.
3. The monthly ATSS itemized billing shall be reviewed by General Services.
4. All ATSS calls must be consistent with State regulations and law as outlined in the State of California Telephone Directory.

Attachment

LONG DISTANCE CALL LOG

date	time	number called	person called	subjects discussed

PROPOSED LONG-DISTANCE CALL LOG
 (8½" x 5½")

THINK... before dialing!

Before using that telephone again, please consider these facts.

THE PROBLEM

- _____
- _____
- _____
- _____

THE POLICY

- _____
- _____
- _____
- _____

REMEMBER

- _____
- _____
- _____
- _____

WHAT YOU CAN DO

- _____
- _____
- _____
- _____
- _____
- _____
- _____

FOR EVERYBODY'S GOOD, PLEASE HELP REDUCE COSTS

PROPOSED POLICY BRIEF ON TELEPHONE USE

Text of Proposed Policy Brief

The Problem:

- o Telephone costs are over \$24,000 monthly, or almost \$300,000 a year
- o Telephone costs have doubled since last year.
- o Since the move to the new building, long distance and message unit calls have gone up by 50%.

The Policy:

- o Company telephones are for business use.
- o Your itemized monthly bill will be reviewed by your department head
- o Message unit calls for personal use are not allowed, except when directly related to work, as when you are required to work late or because of an emergency.
- o Long distance calls for personal reasons are not allowed.
- o Consult your supervisor or the Telephone Use Policy for details.

Remember This:

- o All outside calls cost money: no calls are free.
- o All message unit and long distance calls you make are listed on your itemized monthly bill.
- o Canoga Park, Covina, San Fernando are long distance calls: one, three-minute call a day to one of these locations costs the RTD \$11.97 a month.

How You Can Help:

- o Avoid unnecessary calls.
- o Keep it short.
- o Make personal calls from pay phone.
- o Follow the Telephone Use Policy

Proposed Telephone Equipment Policy

Purpose

The purpose of this policy is to outline general guidelines on telephone equipment installation that shall occur in the future and to describe the procedure and responsibility for requesting telephone service changes. This policy should serve as a tool for all departments in developing equipment requests and for the General Services Department in evaluating future telephone service requests.

Policy Guidelines for Telephone Equipment Installation

1. Employees will be provided with the level of telephone service commensurate with the performance of function and job duties.
2. Employees who need outside lines, below the level of department head, will be provided with a single line and will be expected to answer their own telephones. Exceptions would only be accepted in departments concerned with emergency or security. Need must be demonstrated.
3. When the number of incoming and outgoing calls is not frequent, or can be coordinated, employees should share lines.
4. As outlined in the Executive Policy on Telephone Usage, department heads will be responsible for communicating to their employees the District concern for keeping telephone costs and equipment to a minimum.
5. When a department or section of a department changes locations in the 425 South Main building, the original telephone number should remain with the unit.

Procedure for Telephone Equipment Changes

1. To change telephone equipment or service in RTD departments, a request for telephone changes must be originated on a purchase requisition, and signed by the Executive of the department.
2. This requisition must be accompanied by a justification for the equipment change and consistent with accepted equipment guidelines.

3. The requisition should then be submitted to the General Services Manager who will determine the total cost of the requested change including installation and evaluation of the need for change.
4. Approval of the requisition shall be made by the General Services Manager.
5. It is the responsibility of the General Services Department to provide the communications expertise and knowledge to assist departments in determining the technological features best suited to their needs within the range of cost-effectiveness.
6. The Management Services Section, having developed some familiarity with the telephone technology, when requested should assist in the analysis of requests for equipment changes.

Directory Instructions on ATSS Use

- o The State of California Automatic Telecommunications Switching System (ATSS) can be reached by most District main-line telephones and can, when correctly used, result in reduced long distance cost to many areas of California.

- o When using the "State Line", it is necessary to:
 - a) consult the State Telephone Directory, which provides necessary detailed information on area codes and prefixes which may be reached through ATSS, peak and non-peak calling hours, and on-system and off-system numbers;

 - b) consult the ATSS "Dialing Guide" which lists restricted prefixes in Orange, Riverside and San Bernardino counties for which the State prohibits ATSS use to the RTD; and

 - c) follow dialing instructions carefully.

This information is available from your department head.

- o It is against the law to make personal calls on the "State Line". (State Administrative Manual, Section 4533)

- o The State charges the RTD for ATSS use based on a monthly itemized billing which shows both call origins and destinations. This itemized billing includes a computerized identification of possible personal or inappropriately made calls.